REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 1-23 are pending in the present application, Claims 1, 3, 7, 9, 13, 14, 16, and 23 having been amended. Support the amendments to Claims 1, 3, 7, 9, 13, 14, 16, and 23 are found in the Fig. 3, for example, and no new matter is added.

In the outstanding Office Action, Claims 1-3, 5-9, 11-17, and 19-23 were rejected under 35 U.S.C. §102(b) as anticipated by Maniwa et al. (U.S. Patent No. 5,768,483, herein Maniwa); and Claims 4, 10, and 18 were rejected under 35 U.S.C. §103(a) as unpatentable over Maniwa in view of Hu et al. (U.S. Patent No. 5,459,579, herein Hu).

In a non-limiting embodiment of the claimed invention, a multi-function apparatus includes a plurality of image forming apparatuses, a buffer memory, a data transmission mechanism, and a connector. Each of the image forming apparatuses includes its own dedicated controller that includes a program memory for storing a program used by the image forming apparatus. The data transmission mechanism is configured to connect the plurality of image forming apparatuses to each other so as to allow a data transmission therebetween. The connector is configured to connect an external storage to the data transmission mechanism so as to allow a data transmission from the external storage to the buffer memory. The external storage stores data of programs to be respectively used by the plurality of image forming apparatuses. When the external storage is connected to the connector, the data of the programs stored in the external storage are transmitted to the buffer memory through the connector and are downloaded into the respective program memories included in each of the dedicated controllers of the plurality of image forming apparatuses through a data transmission using the data transmission mechanism. Thus, downloading programs to the

respective memory devices can be performed through a single common connector, thereby minimizing the hardware required by the system.

With respect to the rejection of Claim 1 as anticipated by Maniwa, Applicant respectfully traverses the rejection because Maniwa does not teach or suggest every element of Claim 1.

Claim 1 recites, *inter alia*, "a plurality of image forming apparatuses, each comprising its own dedicated controller including a program memory for storing a program used by each of said plurality of image forming apparatuses, respectively." Maniwa does not teach or suggest this element of Claim 1.

On the contrary, Maniwa discloses a digital copier system that includes copier 105. Copier 105 is a complete copier by itself and includes scanner 110a and printer 110b. The digital copier system also includes scanner/printer controller 107, which controls copier 105. Copier 105 also includes copier controller 112, which is described as controlling the copier engine section 110.[1] Maniwa only describes that the copier, scanner, and printer share a controller, and does not describe or suggest that the copier, scanner, and printer each have their own controller respectively.

Furthermore, scanner/printer controller 107 and copier controller 112 do not include a program memory for storing a program used by each of said plurality of image forming apparatuses. Fig. 1 and the written description in Maniwa do not the describe copier controller 112 as including a memory. The memory included in scanner/printer controller 107 does not store a program used by an image forming apparatus. The scanner/printer controller 107 has a function for inputting output of the printer and for input-output by the scanner with a page buffer memory provide at a center thereof. The scanner/printer controller converts print data (a print data system) received thereby from workstation 103 to

---

[1] Maniwa, col. 6, lines 1-8.

generate image data in the page buffer memory by one page, and outputs raster data by one

page to the copier engine section 110. If the capacity of the page buffer memory is

insufficient, scanning is interrupted until the data is shifted to the HDD 109.[2] Thus, the

memory included in scanner/printer controller 107 does not store a program used by an image

forming apparatus.

Furthermore, ROM 302 and RAM 303 are not described by Maniwa as included in a

controller. Fig. 3 does not show where ROM 302 and RAM 303 are located in the system

and there is no suggestion that they be included in a controller for each of the plurality of

image forming apparatuses.

Thus, Maniwa does not teach or suggest the claimed "a plurality of image forming

apparatuses, each comprising a controller including a program memory for storing a program

used by each of said plurality of image forming apparatuses, respectively."

Claim 1 also recites

> when said external storage is connected to said connector,
> said data of said programs stored in said external storage are
> transmitted to said buffer memory through said connector
> and are downloaded into said program memory included in
> said dedicated controller of each of said plurality of image
> forming apparatuses, respectively, through a data
> transmission using said data transmission mechanism.

Maniwa does not teach or suggest these elements of Claim 1.

The outstanding Office Action asserts that ROM 302 equates to the memory included

in the controller.[3] Maniwa describes that a required program is stored in ROM 302, but the

program may be stored in HDD 109. In the latter case, only a program for loading a required

program from HDD 109 may be stored in ROM 302. The loaded program operates on

---

[2] Maniwa, col. 7, lines 15-17, 34-38, and 53-56.
[3] Office Action mailed June 27, 2005 at page 2.

memory 303.[4] Thus, <u>Maniwa</u> describes that the program is loaded from ROM 302 or HDD

109 to RAM 303.

<u>Maniwa</u> does not describe or suggest that a program is downloaded into the program

memory included in the controller of each of the plurality of image forming apparatuses. Fig.

3 shows that RAM 303 includes scanner memory, printer memory, and system RAM.

However, <u>Maniwa</u> does not describe or suggest that these different memories are included in

a controller of each of the plurality of image forming apparatuses.

In addition, the outstanding Office action asserts that RAM 303 equates to the claimed

buffer memory.[5] However, the program in the claimed invention is transmitted to the buffer

memory through the connector and is downloaded into the program memory included in the

controller of each of the plurality of image forming apparatuses. Since <u>Maniwa</u> describes

that the loaded program operates on RAM 303, <u>Maniwa</u> has no reason to download the

program into the program memory included in the controller of each of the plurality of image

forming apparatuses.

In addition, the outstanding Office Action asserts that ROM 302 equates to the

claimed program memory included in the controller. Claim 1 recites that the program is

downloaded into the memory included in each of the plurality of image forming apparatuses.

However, as discussed above, the program is not downloaded to ROM 302, but is rather

loaded from ROM 302.

<u>Hu</u> does not cure the above-noted deficiencies of <u>Maniwa</u>. <u>Hu</u> was only cited to

describe UART, and does not teach or suggest, at least, the claim elements noted above.

In view of the above-noted distinctions, Applicant respectfully submits that Claim 1

(and Claims 2-6) patentably distinguish over <u>Maniwa</u> and <u>Hu</u>, alone or in combination. In

---

[4] <u>Maniwa</u>, col. 12, line 65 to col. 13, line 2.
[5] Office Action mailed June 27, 2005 at page 2.

addition Applicants respectfully submit that Claims 7-23 patentably distinguish over <u>Maniwa</u>

and <u>Hu</u>, alone or in combination, for at least the reasons stated for Claim 1.

Consequently, in light of the above discussion, the present application is believed to

be in condition for allowance, and an early and favorable action to that effect is respectfully

requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Gregory J. Maier
Gregory J. Maier
Attorney of Record
Registration No. 25,599

Surinder Sachar
Registration No. 34,423

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

I:\ATTY\JW\206173US\206173US_AM DUE 9-27-05.DOC

14